

RESPONSE AND AMENDMENT
Serial No. 10/092,795
Page 1 of 7

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE
PATENT APPLICATION

Applicant: **Nallan et al.**Case: **7017/ETCH/CONE**Serial No.: **10/092,795**Filed: **March 6, 2002**Examiner: **Tuan H. Nguyen**Group Art Unit: **2813**Title: **METHOD OF PLASMA ETCHING OF HIGH-K DIELECTRIC
MATERIALS WITH HIGH SELECTIVITY TO UNDERLYING LAYERS**

COMMISSIONER FOR PATENTS
Box Non-Fee Amendment
Washington, DC 20231

#6/A
2/12/03
GJR

RESPONSE AND AMENDMENT UNDER 37 C.F.R. §1.111

SIR:

In response to the Office Action dated November 6, 2002, please amend the above-identified patent application as follows:

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IN THE CLAIMS

Please rewrite claim 17 as follows:

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17. (Amended) A method for plasma etching a workpiece having a layer of hafnium-oxide comprising the steps of:

supplying between 20 to 300 sccm of chlorine and between 2 to 200 sccm of carbon monoxide;

maintaining a gas pressure of between 2-100 mTorr;

applying a bias power to a cathode electrode of between 5 to 100 W;

applying power to an inductively coupled antenna of between 200 to 2500 W to produce a plasma containing said chlorine gas and said carbon monoxide gas;

PTO/SB/21 (08-00)

Please type a plus sign (+) inside this box →

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>		Application Number 10/092,795
		Filing Date March 6, 2002
		First Named Inventor Nallan, et al.
		Group Art Unit 2813
		Examiner Name Tuan H. Nguyen
Total Number of Pages in This Submission		Attorney Docket Number 7017/ETCH/CONE

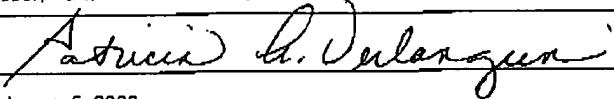
ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers <i>(for an Application)</i> <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <div style="border: 1px solid black; padding: 2px; width: 100px; margin-top: 5px;">Remarks</div>	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group <i>(Appeal Notice, Brief, Reply Brief)</i> <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) <i>(please identify below):</i>

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Patricia A. Verlangieri, Esq. Moser, Patterson & Sheridan, LLP
Signature	
Date	February 5, 2003

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FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$ 0)

Complete If Known	
Application Number	10/092,785
Filing Date	March 6, 2002
First Named Inventor	Nallan, et al.
Examiner Name	Tuan H. Nguyen
Group / Art Unit	2813
Attorney Docket No.	7017/ETCH/CONE

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METHOD OF PAYMENT (check one)					FEE CALCULATION (continued)																																																																																																																																							
<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any over payments to: Deposit Account Number 20-0782 Deposit Account Name Moser, Patterson & Sheridan, LLP <input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27					3. ADDITIONAL FEES <table border="1"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td></tr> <tr><td>117</td><td>920</td><td>217</td><td>460</td></tr> <tr><td>118</td><td>1,440</td><td>218</td><td>720</td></tr> <tr><td>128</td><td>1,950</td><td>228</td><td>980</td></tr> <tr><td>119</td><td>320</td><td>219</td><td>160</td></tr> <tr><td>120</td><td>320</td><td>220</td><td>160</td></tr> <tr><td>121</td><td>280</td><td>221</td><td>140</td></tr> <tr><td>138</td><td>1,510</td><td>128</td><td>1,510</td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td></tr> <tr><td>141</td><td>1,280</td><td>241</td><td>640</td></tr> <tr><td>142</td><td>1,280</td><td>242</td><td>640</td></tr> <tr><td>143</td><td>480</td><td>243</td><td>230</td></tr> <tr><td>144</td><td>520</td><td>244</td><td>310</td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td></tr> <tr><td>146</td><td>740</td><td>245</td><td>370</td></tr> <tr><td>149</td><td>740</td><td>249</td><td>370</td></tr> <tr><td>179</td><td>740</td><td>278</td><td>370</td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td></tr> <tr><td colspan="5">Other fee (specify) _____</td></tr> <tr> <td colspan="5">*Reduced by Basic Filing Fee Paid</td> <td colspan="5">SUBTOTAL (3) (\$ 0)</td> </tr> </tbody> </table>					Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid	105	130	205	65	127	50	227	25	139	130	139	130	147	2,520	147	2,520	112	920*	112	920*	113	1,840*	113	1,840*	115	110	215	55	116	400	216	200	117	920	217	460	118	1,440	218	720	128	1,950	228	980	119	320	219	160	120	320	220	160	121	280	221	140	138	1,510	128	1,510	140	110	240	55	141	1,280	241	640	142	1,280	242	640	143	480	243	230	144	520	244	310	122	130	122	130	123	50	123	50	126	180	126	180	581	40	581	40	146	740	245	370	149	740	249	370	179	740	278	370	169	900	169	900	Other fee (specify) _____					*Reduced by Basic Filing Fee Paid					SUBTOTAL (3) (\$ 0)				
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SUBMITTED BY						Complete (if applicable)	
Name (Print/Type)	Patricia A. Verlangieri	Registration No. Attorney/Agent)	42,201	Telephone	(732) 530-9404		
Signature	<i>Patricia A. Verlangieri</i>			Date	February 5, 2003		

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THIS MESSAGE HAS 12 PAGES INCLUDING THIS SHEETTO: Commissioner for PatentsFAX NO.: 703-872-9318FROM: Patricia A. Verlangieri, Esq.DATE: February 5, 2003MATTER: Serial No. 10/092,795 Filed: March 6, 2002DOCKET NO.: 7017/ETCH/CONEAPPLICANT: Nallan, et al.

The following has been received in the U.S. Patent and Trademark Office on the date of this facsimile:

Petition
 Disclosure Statement & PTO-1449
 Priority Document
 Drawings (sheets) informal
 Response and Amendment (7 pages)

Transmittal Letter (2 copies)
 Fee Transmittal (2 copies)
 Deposit Account Transaction
 Facsimile Transmission Certificate
 dated February 5, 2003

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8

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Allyson M. DeVestry
 Name of person signing this certificate

Allyson M. DeVestry 2-5-03
 Signature and date